MULTIMEDIA UNIVERSITY

STUDENT IDENTIFICATION NO

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FINAL EXAMINATION

TRIMESTER 2, 2017/2018

BRI 3114 – HUMAN RESOURCE INFORMATION SYSTEMS

(All sections / Groups)

5th MARCH 2018

9:00AM – 11:00AM
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This Question paper consists of **FIVE (5) pages with ONE (1) SECTION.**

2. Answer **ALL** questions and all questions carry equal marks and the distribution of the marks for each question is given.

3. Write all your answers in the Answer Booklet provided.

Read the case and answer ALL questions (100 marks).

CASE STUDY: Developing an HRIS Solution

The KLW Healthcare Bhd (KLWHB) needed better HRD data. No one had a complete understanding of where health workers were deployed or what jobs they were doing. Some employees were not taken off the payroll after leaving the KLWHB's employment and became "ghost workers" in the system, receiving a paycheck even though they no longer worked for the company. Since workers were not removed from the system, replacement workers were placed in incorrect positions just so they could be put on the payroll, making the system unreliable for workforce management and planning.

An HRIS assessment in KLWHB revealed the sources of these problems. HR data were stored in separate systems, some electronic and some paper-based, which were not linked. Information flowed slowly between systems and didn't reach everyone who needed it, so that systems were not updated or errors were introduced. The systems also could not be queried to produce analyses or reports.

The company's Stakeholder Leadership Group prioritized requirements for a comprehensive solution:

- Create electronic records for all health care staff, regardless of employer (including the private sector)
- Include additional data items relevant to HRD, such as registration numbers and facility codes
- Institute tight security to protect access to data
- Complement rather than duplicate an existing Public Service HR database.

Implementing the new HRIS

To quickly address these problems, the Capacity Project developed a new HRIS and implemented it over time. The Project took the following steps:

1. Develop a data collection form to include additional data items and distribute it to health facilities to capture a snapshot of current health worker data.
2. Program a simple database in Microsoft Access to run alongside the existing HR database and hold records of health workers.
3. Generate a staffing report from both databases and circulate it to all health facilities for updating and correction to validate the accuracy of the new data. Make corrections in the Microsoft Access database.
4. Institute data-quality procedures to improve the accuracy and timeliness of data inputs.
5. Establish a monthly updating process and develop forms to capture data changes. Updates are regularly made to each database separately by the owner of that database.
6. Combine records from both databases to produce a single dataset that is updated monthly, enabling reports and analysis on all health workers in the company.

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The Microsoft Access database is installed in a server at the Public Service department and is updated centrally by the KLWHB's Personnel unit. The database is protected by a Windows login. Confidential information is only accessible by authorized staff from the office of the Principal Personnel Officer, but summary reports and simple staff listings are available to all staff.

Reporting is done through a simple user interface, making queries on HR data very easy. Several standard reports were created for regular access, while detailed queries can be completed using Microsoft Excel pivot tables. All offices at the KLWHB building are connected to the database, but access is limited to printing standard reports. The office of the Principal Personnel Officer prints and distributes reports to users who are not directly linked to the databases.

The step solution has improved information flow between various systems and among groups that use HR data. Health workforce data from the original Public Service HR database are downloaded monthly into the new HRIS database. Reports from this database are sent to health facilities departments. The health facilities departments use these reports to send monthly updates such as inventory report, memos to the personnel unit. Occasionally, statistic unit will maintain the system to ensure the accuracy of the data.

The new HRIS facilitated data reconciliation among the separate systems, and system identified a large number of discrepancies. These range from simple data-entry errors to the elimination of the "ghost worker" problem.

The KLWHB used new and accurate data to analyse vacancies and manage deployments, as well as to develop the company's long-term Health Workforce Strategic Plan.

Source: http://www.ihris.org/toolkit/tools/step_solution.html

QUESTION 1

a) In preparing a Cost-Benefit Analysis (CBA) for this project, what are some of the costs and benefits involved in this HRIS project? Discuss at least **FOUR (4)** cost and **FOUR (4)** benefit that involved.

(16 marks)

b) The new HRIS will help to deliver transactional, traditional and transformational HR activities more efficiently and effectively, do you agree? Why or why not?

(9 marks)

(Total 25 marks)

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QUESTION 2

a) Based on the case, develop the context level Data Flow Diagram (DFD) for the new HRIS system.

(10 marks)

b) To avoid incompatibility of the system happen during the system implementation, a thorough feasibility assessment of the project need to be carried out. Discuss **FIVE (5)** types feasibility assessment and what information does each type of feasibility provide the organization.

(15 marks)
(Total 25 marks)

QUESTION 3

a) KLWHB is considering to introduce Training & Development (T&D) application in the new HRIS. Suggest **FIVE (5)** success factors that may increase the T&D application completion rate.

(10 marks)

b) To protect personal data from being misused, Personal Data Protection Act 2010 (PDPA) came into force in Malaysia on 15 November 2013. Briefly discuss **SEVEN (7)** principles that stated in this act.

(15 marks)
(Total 25 marks)

QUESTION 4

With the newly installed HRIS, management of KLWHB has decided to calculate the annual turnover cost in the company. Following the formulas presented in Appendix, an HR specialist collected the following information:

Total number of employee over the past year was 1000, KLWHB has experienced 25 percent turnover rate in the same year. Three groups of employees were primarily responsible for this: non-executive employee (36 percent), who make an average of RM18.50 per hour in wages and benefits; executive employees (40 percent), who make an average of RM33.20 per hour; and manager (24 percent), who make an average of RM44.75 per hour.

Separation Cost
Exit interviews take about 45 minutes plus 15 minutes preparation; the interviewer, an HR specialist, is paid an average of RM31 per hour in wages and benefits. The HR department takes about 90 minutes per terminating employee to perform the administrative functions related to terminations; on top of that, each terminating employee gets two weeks' severance pay. Working hours for employee is 40 hours per week.

Replacement Cost
All pre-employment physicals are done by Qlink Sdn Bhd., an outside organization that charges RM250 per physical. Advertising and employment –agency fees run an additional RM550, on average, per termination, and HR specialists spend an average of four hours communicating job availability every time an employee quits. **Continued...**

Pre–employment administrative functions take two and a half hours per terminating employee, and this excludes pre-employment interview time (one hour, on average). Over the past year, records also show that, for every candidate hired, three candidates had to be interviewed. Testing costs per applicant are RM14 for materials and another RM14 for scoring. Travel expenses average RM85 per applicant, and one in every ten new hires is reimbursed an average of RM55,000 in moving expenses. For those management jobs being filled, a 90 minutes staff meeting is also required, with a department representative (average pay and benefits of RM37.75 per hour) present. In the past year, 17 meetings were held. Finally, post-employment acquisition and dissemination of information takes 75 minutes, on average, for each new employee. Contracted medical examination charged per new hire is RM250.

Training Cost

Informational literature alone costs RM19 per package. New employees make an average RM22.50 per hour in wages and benefits. After that, a formal training program (run 12 times last year) takes four days (8 hours per day), and trainers make an average of RM46 per hour in wages and benefits. About 65 percent of all training costs can be attributed to replacements for those who left. Finally, on-the-job training lasts three days (8 hours per day) per new employee, with two new employees assigned to each experienced employee (average pay and benefits = RM36.25 per hour). During training, each experienced employee's productivity dropped by 50 percent.

Net DP was +RM210,000.

What is the turnover cost in KLWHB last year? How much turnover cost per employee who left?

Note: Please write your answers in 2 decimal places.

(25 marks)

Appendix

Separation Cost (S_T)

Cost Element	*Formula*				
Exit interview (S_1)	= cost of interviewer's time cost of terminating employee's time	= (time required prior to interview = time required for the interview	+ time required for the interview) x weighted average pay for terminated employees	x interviewer's pay rate during period x number of turnovers during period	x number of turnovers during period
Administrative functions related to termination (S_2)	= time required by HR dept. for administrative functions related to termination	x average HR dept. employee's pay rate	x number of turnovers during period		
Separation pay (S_3)	= amount of separation pay per employee terminated	x number of turnovers during period			

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Replacement Cost (R_T)

Cost Element	*Formula*			
Communicating job availability (R_1)	= [advertising and employment agency fees per termination	+ (time required for communicating job availability	x HR dept. employee's pay rate)]	x number of turnovers replaced during period
Pre-employment administrative functions (R_2)	= time required by HR dept. for pre-employment administrative functions	x average HR dept. employee's pay rate	x number of applicants during period	
Entrance interview (R_3)	= time required for interview	x interviewer's pay rate	x number of interviews during period	
Testing (R_4)	= (cost of materials per person	+ cost of scoring per person)	x number of tests given during period	
Staff meeting (R_5)	[= time required for meeting	x (HR dept. employee's pay rate	+ dept. representative's pay rate)]	x number of meetings during period
Travel/moving expenses (R_6)	= (average travel cost per applicant	x number of applicants)	+ average moving cost per new hire	x number of new hires
Post-employment acquisition and dissemination of information (R_7)	= time required for acquiring and disseminating information	x average HR dept. employee's pay rate	x number of turnovers replaced during period	
In-house medical examinations (R_8)	= [(time required for examination	x examiner's pay rate)	+ cost of supplies used]	x number of turnovers replaced during period
OR				
Contracted medical examinations (R_9)	= rate per examination	x number of turnovers replaced during period		

Training Cost (T_T)

Cost Element	*Formula*					
Informational literature (T_1)	= cost of informational package	x number of replacements during period				
Instruction in a formal training program (T_2)	= [length of training program	x average pay rate of trainer(s)	x number of programs conducted	x proportion of training costs attributed to replacements]		
	+ [average pay rate per trainee	x total number of replacements trained during period	x length of training program]			
Instruction by employee assignment (T_3)	= number of hours required for instruction	x [(average pay rate of experienced employee	x proportional reduction in productivity due to training	x number of experienced employees assigned to on-the-job training)	+ (new employee's pay rate	x number of instructions during period)]

Total Cost of Turnover = $S_T + R_T + T_T + D_P$

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